

No 24

An

Inaugural Essay.

On The  
Therapeutical effects of Purgatives.

By

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Of

South Carolina.

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## Therapeutical effects of Purgatives

In all descriptions of purgative medicines, we are informed that they were among the first articles of the Materia Medica, brought into general use. And from the simplicity of their operation, which is, to increase the powers of an office of nature daily performed, we may readily conclude, some of the articles of this class, would be early discovered. Accordingly, we are told that in every age they have been freely used, and are found, as remedies, among the rudest and most uncultivated savages.

But though thus early and generally resorted to, we have reason to believe, that their utility has not always been clearly understood, or their administration properly directed.

In the raveries of former superstition, Their administration was at one time recommended, at the junction or opposition of certain planets, certain seasons of the year, or ages of the moon, At a period nearer to our

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soon time, the aid of purgative medicines, was called in to expel certain peccant matters, supposed to have been previously separated from the mass of blood, by appropriate fermentation; A specific action was also ascribed to different purgatives, suited to the removal of particular noxious fluids.

The gradual improvement of science, has corrected many of the erroneous notions respecting the power of medicines, which from the occult nature of their operations, have afforded a wide field for the range of superstition, and the loose conjectures of imagination.

Although the present state of the science, does not admit claims to perfection, discrimination in the effects of medicines, seems more generally to characterize their administration. Among other classes purgative medicines seem recently to have had a considerable share in the general improvement. The important place which they now occupy in the practice of physic, makes it highly necessary, that every one entering on that profession, should study with care

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the nature of their operations, and their powers in removing diseases.

It is not my intention to enter into a minute history of their progress, or to enumerate the persons, who have contributed to their improvement; But it would be superfluous an acknowledgment, which I believe every one acquainted with the author would fully render were I to pass over the work of the celebrated Dr Hamilton, as contributing in a high degree, to establish and illustrate, some of the most important improvements recently made in the application of purgatives. Perhaps no individual within the last twenty years, has rendered more useful services to the profession, than this distinguished man, by his diligence and perseverance, in ascertaining the good effects of these medicines in the cure of diseases, and publishing to the world his knowledge, acquired with so much correct observation.

Dr Cullen seems to have understood pretty fully the antiphlogistic power of purgatives, but from a too cau-

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tious dread of their debilitating effects, he has not availed himself so fully of their advantages in the treatment of diseases. That evacuations by purgatives given in full doses, will debilitate the body is evident, because there is a great depletion of the fluids, and perhaps part of the chyle, and when a vascular action is greatly increased such depletion is useful. But the principle on which Dr. Hamilton recommends purgatives, is not that of reducing and debilitating, but of relieving oppression and lessening irritation. This he accomplishes by giving purgatives, which are stimulating, in small and repeated doses, so as to excite an entire discharge from the intestinal canal, without awakening the excitement of the exhalents so extensively, as to produce any considerable evacuation of the fluids.

In the classification of purgative medicines, although there is considerable variety, yet there is some objection, to pointing out particular articles, as always having certain actions. For by a change in

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the quantity of the same article, there will be a difference in the operation, And a change not less various may be produced from idiosyncrasy, or from different states of the system in the same patient.

They have been divided by pharmaceutical authors into Laxatives, Purgatives, and Drastics, names intended to denote the gentleness, or violence of their operation. It would be unnecessary to enumerate here, the articles generally assigned to each class. A familiar acquaintance with the properties of each, seems pretty necessary to a skilful administration of them in practice, but this is more correctly learned from a particular acquaintance with the powers of each article, than from the classifications of authors. Manna and Samarinds are known by every practitioner to be gentle and mild in their operation, scarcely exciting any unusual sensation in the patient. The Neutral Salts, though occasioning a quicker operation, and much more watery stools generally operate with very little disturbance to the





patient. They sometimes excite thirst, which may be readily gratified, as warm diluting liquors assist the operation. Purgatives, from which claps the articles used by Dr Hamilton are chiefly selected, excite a good deal more action on the intestines and are consequently better adapted to remove the more hardened feces. Some of them have the most important rank of all the articles in medicine, as I shall again have occasion to notice the effects of these. I shall not at present enlarge on their properties. The Drastics act with the greatest violence, generally disordering the stomach and the whole system in a considerable degree, and unless administered with caution, sometimes inflame the intestines.

They are such as the Gamboge, Elatium, Colocynth, and Scillebore. These and some of the more active medicines of the former claps, are said to have been much used by the ancients. They are believed to be efficient in discharging water from the cavity of the peritonium, the chest, and cellular sub-

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The immediate action of purgatives on the intestines, arises from their stimulating properties, and as concerned in producing their discharge, is of two kinds, one increasing their peristaltic motion.

The other stimulating the extremities of their excretory vessels.

Purgatives evidently act by augmenting the natural peristaltic motion, from their stimulant operation on the muscular fibres of the intestines, when they propel with greater force any substance impeding their passages. The greater number also, or perhaps all of them in some degree, stimulate the exhalant vessels, and glandular follicles, opening on the internal surface of the intestines, and occasion more copious evacuations of fluids. This is pretty clearly supported, from the very watery stools which some of the articles produce, especially by the saline purgatives. Besides these immediate actions, the stimulant operation of purgatives

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appears to be more or less extended along the ducts  
leading into the intestines, and thus reduces mor-  
bid accumulations, in the neighboring organs.

That irritation is conveyed along the surface of  
mucous membranes in this way, we have evidence  
from the peculiar sensation sometimes felt at the  
extremity of the glans penis from a stone in the  
pelvis of the kidney. And on the same princi-  
ple perhaps depends the efficacy of closters in  
removing constipation. Another change in the  
determination of the fluids, occasioned by the ac-  
tion of purgatives, is called *roulaison*. It takes  
place in consequence of the depletion from the  
vascular vessels of the intestines "It is a law of the  
circulation" says one of our text books, "Suffi-  
ciently admitted, that if depletion be made from  
any one set of vessels, the current of the circula-  
tion will be directed to them and of course the  
blood diminished in other parts."

Taking into view the operations and effects

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of purgatives we have now shewn, we shall readily perceive they have a commanding influence in all states of the living body, and that their power in curing diseases must be extensive.

A brief account of their applications for this purpose, will compose the rest of our essay.

The treatment of a great majority of diseases, of whatever description, seem ~~of~~ now to be very properly premised, by the administration of a purge. Which unloads the intestines stimulates the absorbents, and prepares the system for the operation of other medicines. The intestines are subject to various accumulations of hardened feces, undigested matter, or inspissated mucus. These substances impede not only the passage of the fresh nutriment, but prevent the absorption of the newly formed chyle, and occasion general languor and debility. Purgatives discharge them, by which operation these medicines are rendered useful in a variety of complaints.

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In febrile diseases, purgative medicines make a very important part of the treatment. So in intermittents, and continued inflammatory fevers they have long been beneficially applied. By their use bile is evacuated with the greatest convenience, and next to amputation, the operation of purgatives most speedily diminishes the force of arterial action. Since the publication of Dr Hamilton's work, they also enter largely into the treatment of typhus fever. Previous to his observations on the utility of purgatives in typhus they were prohibited in a fever so much characterised by low action, on the grounds that they would increase the weakness of the patient, already sinking under debility. The insensate tongue, foul state of the mouth, and dark fetid alvine discharges, uniformly accompanying this fever, do certainly indicate in no small degree the propriety of addressing medicines to the alimentary canal. The experiments of Dr Hamilton

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have happily proved, that purgative medicines administered in small and repeated doses, will remove and completely evacuate the fitid matter without producing debility. On the contrary, the symptoms of dyspepsia are removed and the strength of the patient is daily increased.

This writer, who at first experimented on the use of purgatives in typhus with considerable anxiety, after directing a strict attention to the practice for a long time says, "I am now thoroughly persuaded, that the full and regular evacuation of the bowels, relieves the oppression of stomach, clears the loaded and parched tongue, and mitigates the thirst restlessness and heat of the surface, and that thus the latter and more formidable impression on the nervous system, is prevented, recovery more certainly and speedily promoted, and the danger of relapsing into the fever much diminished."

Witnessing the benefits arising from purgatives

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medicines in typhus, Dr Hamilton was induced to try  
their efficacy in scarlatina, and as he informs us  
with similar success. Some of the violent symptoms  
of this disease, as pungent heat of the surface, vio-  
lent head ache, tumescence of features, and flushing  
of countenance, he observes, he has seen quickly suc-  
ceeded by one or two brisk purgatives. In the subsequent  
periods of the disease, full purging is not required.  
Dr Hamilton confides much in the use of purga-  
tives applied to the disease as it appeared in  
his practice, and concurring with him we have  
highly respectable authority, that they are a use-  
ful auxiliary in the treatment of the disease as it  
occurs in this country. In other cutaneous diseases  
and chronic eruptions, purgative medicines have been  
employed from the remotest times; In many of  
them, and especially in children, they have un-  
doubtedly proved efficacious.

In treatment of the phlegmasia, purgative med-  
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haps, than in any other class of diseases. In many cases of this order they have the highest commendations, from the medical chair of this school.

In acute rheumatism, after amputation, purgatives are to be used freely, and prove very serviceable. They are however still more beneficial in chronic rheumatism, in which the general strength is often so much reduced as to forbid the loss of blood, under such circumstances, active purging is sometimes found to be of very signal advantage.

Notwithstanding it is the opinion of Dr Sydenham, that to endeavour to cure the gout by evacuating medicines, is an attempt fruitless and pernicious. By the authority just mentioned we are taught very differently. Nor is the treatment represented as new or original, but that which prevailed from the time of Hippocrates, till the publication of Sydenham's *Præcursus* on the subject.

The use of purgative medicines in gout is believed to be well supported, both by theory and practice,

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The intestinal connexion which gout is observed to have with certain states of the alimentary canal, which are uniformly treated by evacuating that organ, strongly indicate the application of purgatives in gout. Another circumstance, which further illustrates the practice, is, that the violence of a paroxysm of gout is often suspended by a spontaneous diarrhoea. In addition to this, we are assured by Dr Chapman that from many years experience in the use of purgatives in gout, he is fully convinced of the propriety of the practice. Calomel and Rhubarb are directed till the bowels are completely evacuated, and afterwards the Rhubarb alone, or in combination with elægæstia.

From what has been said of the stimulating action of purgatives, upon the ducts of neighboring organs opening into the intestinal canal, it will be readily understood that purgatives are very appropriate medicines for congestions and obstructions of the liver, and for arresting the hasty progress which inflam-

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ation makes in that organ. "From the enormous size of the liver, the vast flow of blood to it, and its peculiar structure, inflammation here is exceedingly rapid in its course, and often requires to arrest its progress, a concurrence of all our powers, In aid of venesection, which, in its fullest extent is indispensable, the administration of brisk cathartics forms a principal part of the treatment."

The best writers on diseases of tropical climates, where hepatic affections are most prevalent, ascribe to Calomel peculiar efficacy in treatment of diseases of this organ. Besides acting as a common purgative, it is believed to be peculiarly serviceable in increasing and carrying off bilious secretions.

Purgative medicines are also useful in inflammations of other viscera of the abdomen. And are now particularly recommended in peritonitis and purpuræ fever.

The indispensable remedies, which purgative medicines afford in diseases of the alimentary canal

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itself, would alone give them an importance worthy of the highest respect. The train of evils attending a constipated state of the bowels, is productive of no small share of the misery of those persons subject to this irregularity. And is a source of distress from which scarcely any individual is entirely exempted. "A castor habit is incompatible with the enjoyment of health, and is marked by headache, vertigo, nausea, fetid breath, offensive excretions, with numberless symptoms of a highly unpleasant and disgusting nature."

In a directly opposite state of the bowels, purgatives are generally the first means prescribed. The active treatment of dysentery and cholera consists very much in the administration of purgatives. They are also found useful in the early treatment of diarrhoea.

The excellent effects of purgatives in diseases of the head are well known to practitioners. A mechanical assistance, by which pressure is removed from

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the circulation in the blood vessels below, is, perhaps  
very justly, considered as one mode of their favora-  
ble operation here. "When the intestines are loaded,  
and particularly the small intestines, same purpose  
is made on the descending aorta, and the blood  
is determined in larger portions to the ascending  
branches, occasioning pain in the head, languor,  
and general uneasiness. These symptoms purgation  
commonly relieves." In the management of apo-  
plexy, they are inferior to emulsion only. From  
time immemorial, they have had a chief place in  
the treatment of mania. In ophthalmia, they are  
to be used repeatedly. Their efficacy in hydrocephalus  
internus is represented in the following com-  
mending terms by Dr. Chapman. "In many instances  
when this state of the brain was suspected, I have  
seen the disordered stomach, the dilated pupil, the  
comatose tendency, and other alarming symptoms,  
removed by very copious evacuations from the bow-  
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effectually to control the disease, than even venesection.

In different affections belonging to the class of nervous diseases, purgative medicines are now very highly recommended. In cholera they seem to have obtained the confidence not only of Dr Hamilton, but of many other modern practitioners of Europe. The experience of Dr Chapman speaks also very decidedly in their favor. So far as its rare occurrence permits observation, he says, "there is scarcely any chronic affection, of long standing, that yields more readily to any plan of treatment, than cholera to purgatives." Hamilton observes that his practice shared the common fate of disappointment, while he employed the tonic and stimulating medicines, but forming his practice on different views of the disease, and making the first object a removal of the constipated state of the bowels, the success of his practice confirmed the propriety of the treatment.

In hysteria, epilepsy, and tetanus, purgative medicines are also recommended with much confidence.

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In cachectic complaints purgative medicines are beginning to be resorted to, much more extensively. They are particularly recommended by Dr. Hamilton in chlorosis and marasmus. In venereal affections they are also applied with the greatest advantage. White swelling is often very sensibly relieved by a long continued course of purging. We will conclude, by noticing what is said of their benefit in dropsical swellings.

In no disease, perhaps, is the use of purgatives more uniformly sanctioned by respectable authors than in dropsy. In the treatment of a very important case stated by Sydenham, we discover that he used them with considerable latitude and frequency. He, however, with most writers on the subject, agrees, that purgatives are not suited to dropsies connected with a very feeble state of the constitution. Dr. Cullen considers the operation of purgatives more certain than diuretics, for

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drawing off the water, and their administration more safe and convenient than emetics. He recommends them in the following terms. "There are no means we can employ to procure a copious evacuation of serous fluids with greater certainty, than the operation of purgatives, and it is upon these accounts, that purging is the evacuation which has been most frequently, and perhaps with most success employed in dropsy." He gives preference to the more drastic purgatives, says they are the most effectual for exciting absorption, as their stimulus is most readily communicated to other parts of the system. Of late, however, some of the milder purgatives have been very successfully employed, and produce discharges both by stool and urine. A combination of Jalap and Cream of Tartar, will be found generally to produce more copious evacuations than any other articles of this kind we possess. The more fully watery liquors are exhibited during the admin-

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isolation of this combination, the more copious  
will be the urinary discharges.

In noticing the application of purgative  
medicines our observations have been brief,  
presuming, however, that it is not the wish  
of our instructors that our remarks in the  
fulfilment of this duty should be pro-  
tracted; with unfeigned acknowledgments  
for their assistance, most respectfully, the  
above is submitted to their consideration,

